

## **Claims**

1.

1                   A method of producing preforms for blow molding containers, which includes the  
2    steps of:  
3                   (a)     producing polyester polymer by melt phase polymerization, and  
4                   (b)     compression molding preforms of said polyester polymer without  
5    solidifying the polyester polymer prior to compression molding the preforms.

2.

1                   The method set forth in claim 1 wherein said step (a) includes producing a  
2    continuous flow of said polyester polymer in melt phase, and  
3                   wherein said step (b) includes dividing said continuous flow into individual  
4    compression mold charges in melt phase.

3.

1                   The method set forth in claim 2 wherein said step (b) includes: (b1) providing a  
2    continuous flow of compression mold cavities, (b2) placing each said mold charge into an  
3    associated cavity and (b3) compression molding said mold charge into a preform, such that there  
4    is a continuous flow of polyester polymer from said step (a) through said step (b) to produce a  
5    continuous flow of preforms following said step (b).

4.

1                   The method set forth in claim 3 including the step of: (c) cooling said preforms  
2   compression molded in said step (a).

5.

1                   The method set forth in claim 3 including the step, between said steps (a) and (b),  
2   of layering said polyester polymer in said continuous flow with at least one additional polymer  
3   to produce preforms in said step (b) having a layered wall.

6.

1                   The method set forth in claim 3 including the steps of:  
2                   (c)    blow molding containers from said preforms,  
3                   (d)    filling the containers with product, and  
4                   (e)    capping the containers with said product captured therein,  
5                   said steps (c), (d) and (e) being a continuous in-line continuation of said steps (a)  
6   and (b) to produce filled and capped containers of polyester polymer in a continuous operation.

1                   A method of producing preforms for blow molding plastic containers, which  
2 includes the steps of:

3                   (a)     producing a continuous flow of polyester polymer by melt phase  
4 polymerization,

5                   (b)     providing a continuous motion of preform compression mold cavities,

6                   (c)     dividing said continuous flow of polyester polymer into individual  
7 compression mold charges in melt phase,

8                   (d)     placing each said mold charge into an associated mold cavity, and

9                   (e)     compression molding each said mold charge into a preform,

10                  such that there is a continuous flow of polyester polymer from said step (a)  
11 through said step (e) to produce a continuous flow of preforms in said step (e).